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27.080 McDonnell Douglas
Tract I

JOHN ASHCROFT
Governor

FREDERICK A. BRUNNER
Director

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Division of Energy
Division of Environmental Quality
Division of Geology and Land Survey
Division of Management Services
Division of Parks, Recreation, and Historic Preservation

DIVISION OF ENVIRONMENTAL QUALITY
St. Louis Regional Office
8460 Watson Road, Suite 217
St. Louis, MO 63119
314-849-1313

September 24, 1987

LOW # 87-SL.047

Mr. Robert Kaatman, Section Manager
Environmental Compliance
McDonnell Douglas Corporation
Department 891C, Building 80
Level 2, Post C-2
P. O. Box 516
St. Louis, Missouri 63166

Dear Mr. Kaatman:

Enclosed please find a report of an inspection conducted by Mr. Joe Haake of my staff. Please note that under the section titled "UNSATISFACTORY FEATURES" are findings requiring corrections be taken. The section titled "RECOMMENDATIONS" outlines the steps the inspector has determined will correct the violations noted in the report.

In order to document that corrective actions have been taken you are requested to submit a written response no later than November 15, 1987. The response should describe the steps taken to correct each Unsatisfactory Feature identified. Please direct the response to my attention.

It is our purpose by this letter to persuade you to take all necessary actions to comply with the Missouri Hazardous Waste Management Law. Failure to provide the written response as requested may result in the issuance of a Notice of Violation. Failure to achieve timely resolution of violations may result in the referral of this case for enforcement by the Waste Management Program.

Should you have any questions, or wish to confer in this matter, please contact me.

Sincerely,

DEPARTMENT OF NATURAL RESOURCES

T. D. Maddox for
Walt Puryear
Chief, Waste Management Unit
St. Louis Regional Office

WP:mc
Encl.

CC: Central Office - WMP

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HAZARDOUS WASTE COMPLIANCE INSPECTION REPORT

FACILITY

McDonnell Douglas Corporation
Department 891C, Building 80
Level 2, Post C-2
P. O. Box 516
St. Louis, Missouri 63166
(314) 232-3319

MDNR GENERATOR ID#: 01001
U. S. EPA ID#: MOD000818963
FACILITY PERMIT #: 0S0 062284 002

Mr. Robert Kaatman - Section Manager, Environmental Compliance

INTRODUCTION

An inspection of the McDonnell Douglas Corporation (MDC) - Tract I facility was conducted on September 17, 1987, to assess compliance with the hazardous waste facility permit and applicable requirements pursuant to the Resource Conservation and Recovery Act and the Missouri Hazardous Waste Management Law. Mr. Joe Haake, Environmental Specialist, represented the Missouri Department of Natural Resources - St. Louis Regional Office. Messrs. Robert Kaatman and Brian Kury of the Environmental Compliance Section represented the facility.

INTRODUCTION

The MDC - Tract I facility is primarily a manufacturing site for high technology aerospace products including military aircraft, space systems, and missiles. Hazardous wastes generated at the facility are those associated with the fabrication of aluminum, titanium, composite structures, and other materials used in the manufacture of items such as airframes. A total of forty-nine (49) hazardous waste streams, which are registered with the Missouri Department of Natural Resources, continues to be generated at the site. These waste streams include acid and alkaline solutions, halogenated and non-halogenated solvents, paint sludges and solids, pretreatment sludges, cyanide solutions, explosives, jet fuel, oil, and miscellaneous laboratory chemicals.

The Tract I facility is a fully permitted TSD facility and utilizes a variety of tanks for storage of hazardous waste. Containerized hazardous waste is also stored at the site. The containerized waste storage area is designated as the site which manages the drummed hazardous waste from each of the ten (10) other MDC generators located in the metropolitan

St. Louis area. Wastes generated at these sites are transported to the Tract I area via licensed MDC vehicles.

Hazardous waste in storage at the facility is eventually hauled by licensed transporters to off-site disposal or resource recovery facilities. The contractors currently used are as follows:

1. Heritage Environmental Service in Indianapolis, Indiana.

2. L. W. D., Inc., in Calvert City, Kentucky.

3. Peoria Disposal Company in Peoria, Illinois.

4. Chemical Waste Management in Emelle, Alabama.

5. Trade Waste Incineration, Inc., in Sauget, Illinois.

6. Rollins Environmental Services in Deer Park, Texas.

7. Kiesel Oil Company in St. Louis, Missouri.

No process changes have occurred since the issuance of the hazardous waste facility permit. Reference should be made to the MDC permit application for a complete description of the permitted storage components and generated hazardous wastes.

UNSATISFACTORY FEATURES

1. The leak detection systems for underground storage tanks were not operational as required by 10 CSR 25-7.264(2)(J)4.

2. Resource recovery certification had not been applied for as required by 10 CSR 25-9.010(1)(C).

3. The facility contingency plan was not current as required by 10 CSR 25-7.264(2)(D) incorporating by reference 40 CFR 264.54.

DISCUSSION

Approximately eighty-two (82) 55-gallon drums and several 5-gallon carboys of corrosive hazardous waste were observed in section 1 of container storage area 1. Section 2 of container storage area 1 contained approximately one hundred twelve (112) 55-gallon drums of waste oil and sixty-nine (69) 55-gallon drums of waste solvent, paint sludge, and other hazardous waste. A total of twenty-four (24) 55-gallon drums of cyanide and sulfide waste were present in container storage area 2. No waste was observed in container storage area 3. The storage of containerized waste appeared to be in accordance with the facility permit.

An inspection of the tank storage areas revealed that the six (6) 750-gallon and five (5) 500-gallon aboveground tanks for storage of waste nitric acid and hydrofluoric acid generated in the milling of steel and titanium at building 52 had been removed. The five (5) 500-gallon tanks were replaced with three (3) 850-gallon aboveground tanks.

It was also observed during the inspection of tank storage areas that the leak detection systems for tanks at fuel pit 3 and 4, tanks at ramp station 1 and 2, the F-18 silencer tank, and the hush house tank were not operational. Inspection records indicated that the systems had not been functioning since July 1987. It was explained that the ground water probes were damaged and could not be replaced due to discontinuance by the manufacturer. The facility is in the process of purchasing new leak detection systems.

During chemical milling operations a maskant is applied to metal parts. As the maskant dries the perchloroethylene carrier evaporates and is captured in a vapor recovery hood. The hood discharges to a carbon absorption unit. The captured perchloroethylene is then stream stripped from the carbon, the water is separated out, and the perchloroethylene is recovered as pure solvent. The recovered perchloroethylene is returned, for use as an ingredient in new maskant, to the company that manufactures the maskant material.

In a letter dated February 2, 1987, to Mr. Robert Kaatman, Supervisor, Environmental Compliance - MDC from Mr. Kenneth Davis, Chief, Data Management Unit - Missouri Department of Natural Resources, it was explained that the captured perchloroethylene is a sludge defined by 40 CFR 260.10 because it is a waste generated by an air pollution control facility. Also, in accordance with 40 CFR 261.2 a sludge is a solid waste when reclaimed. Since the captured perchloroethylene is a hazardous waste the recovery of the waste is considered a resource recovery operation, and certification from Missouri Department of Natural Resources must be obtained. At the time of the inspection resource recovery certification had not been applied for.

A review of the facility contingency plan revealed that the list of emergency coordinators was not up to date. Mr. Kaatman stated that the plan was currently being revised. All other required records were found to be in compliance with permit conditions and applicable state and federal regulations.

RECOMMENDATIONS

1. Repair or replace the leak detection system for underground tanks.

2. Submit a resource recovery application for the certification of the perchloroethylene recovery operation.

3. Amend the facility contingency plan to include a current list of emergency coordinators.

4. Submit certification that the six (6) 750-gallon and five (5) 500-gallon aboveground hazardous waste storage tanks were removed in accordance with the approved facility closure plan. The certification must be signed by the owner/operator and an independent professional engineer.

APPROVED BY:

F. Donald Maddox
Regional Administrator
St. Louis Regional Office

PREPARED BY:

Joe Haake
Environmental Specialist
St. Louis Regional Office

FDM/JH/mc

HAZARDOUS WASTE PERMITTED TSD FACILITY Date 9-17-87

GENERATOR CHECKLIST

Name of Facility: McDonnell Douglas Corp. MO Permit # OSO 062284 002

Address: P.O. Box 516 MO I.D. # 01001

St. Louis, Missouri 63166 EPA I.D. # MODOOO818963

Contact: MR. ROBERT KAATMAN Phone No.: 314-232-3319

Transporter? YES, # H01039, Resource Recovery? YES, # -

Provide a brief description of the manufacturing process: MANUFACTURING OF HIGH TECHNOLOGY AEROSPACE PRODUCTS INCLUDING MILITARY FIGHTER AIRCRAFT, SPACE SYSTEMS, AND MISSILES. PROCESSES INCLUDE METAL CUTTING, MILLING, FORMING, GRINDING, AND ELECTROPLATING; DEGREASING; PAINTING; CHEMICAL PROCESSING; AND AIRCRAFT FUELING OPERATIONS.

Describe any new processes added since permit issuance: NONE

Any new waste streams? NO

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WASTE MANAGEMENT PROGRAM

General comments and observations: THE SIX 750 GALLON ABOVE GROUND STORAGE TANKS (H-1 THROUGH H-6) AND THE FIVE 500 GALLON ABOVE GROUND STORAGE TANKS (H-12 THROUGH H-16) HAVE BEEN REMOVED. THE FIVE 500 GALLON TANKS WERE REPLACED WITH THREE 850 GALLON ABOVE GROUND TANKS.

List the hazardous wastes produced:

	Waste	Amount/month	Kilogram/month	I.D. #	Disposition
1.	49 SEPARATE	~42600 LB	~19369		LANDFILL
2.	HAZARDOUS WASTE	~43571 LB	~19805		INCINERATION
3.	STREAMS.	~456583 LB	~207537		TREATMENT
4.		~109150 LB	~49613		RESOURCE RECOVERY
5.					
6.					
7.					
	Total	~65/904 LB	~296324 KG		

Subtract amount going to Resource Recovery or sewer ~49613 KG

Amount subject to generator fee (KKG) ~246.711
(subject if over 2000 lbs. of waste is produced per year)

Is generator fee applicable to this facility? Yes ✓ No ____

If so, is the fee being paid? Yes ✓ No ____

MANIFESTS (10 CSR 25-5.010(4))

- ☑ 1. Generator's Missouri and EPA I.D. Number
- ☑ 2. Serially increasing shipment number
- ☑ 3. Generator's name, address, phone number, EPA I.D. number
- ☑ 4. All transporter's names, addresses, phone numbers, and EPA I.D. numbers Hazardous waste management facility name, address, phone number, and EPA I.D. number
- ☑ 6. Proper DOT shipping name and hazard class
- ☑ 7. Quantity, container type, and number of units being shipped
- ☑ 8. Emergency instruction and special handling procedures
- ☑ 9. Proper certification
- ☑ 10. Manifest properly signed and dated
- ☑ 11. Time between generator and facility signature less than 10 days
- ☑ 12. Copy to generator in 30 days
- N/A 13. If not, exception generator report submitted within 45 days
- ☑ 14. Completed manifests submitted to Department quarterly
- ☑ 15. Copy at facility for three (3) years

Comments on manifests

CONTAINERIZATION AND LABELING

- ☑ 1. Waste properly containerized and labeled during storage if it is being transported off-site (5.010(6))
- ☑ 2. Are wastes stored at non-permitted locations marked with the date of accumulation (7.050(2)(A)4.)
- ☑ 3. Are wastes stored at non-permitted locations stored for less than 90 days (7.050(2)(A))

Inspector's Name: Joe Hanke

Title: ES III

Office: SLRO

GENERAL INSPECTION CHECKLI

Waste Analysis Plan
1. Have the manufacturing processes at the facility changed since the permit was issued (yes, blacken box)
2. Is procedure to confirm wastes received from off-site being followed (7.011(3)(C)3.)

Security (7.011(3)(D))
1. Twenty-four hour surveillance or provision 2 and 3
2. An artificial or natural barrier in good condition and provision 3
3. Restricted access at each entrance
4. Warning signs legible from 50' on all approaches

General Inspection
Conduct an inspection using the facilities checklist
1. Does facility inspection schedule identify problems which could be expected (no, blacken box)
2. Does the schedule inspect the following: (7.011(3)(E)2.)
   a. monitoring equipment
   b. safety and emergency equipment
   c. security devices
   d. operating and structural devices
3. Are inspections being conducted regularly and at the proper frequency (7.011(3)(E)1.)

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WASTE MANAGEMENT PROGRAM

Personnel Training (7.011(3)(F))
1. Have employees completed classroom or on-the-job training
2. Job title description and name of person filling position regularly updated
3. Written record or the type and amount of training given to each person
4. Documentation confirming that training has been given
5. Is there continuing training given (yearly update)
6. Are new employees trained within 6 months

Predaredness and Prevention (7.011(4))
1. Internal communications or alarm system in operation
2. A device in the hazardous waste operation area cable of summoning emergency assistance
3. Portable fire extinguishers and fire control equipment
4. Spill control equipment and decontamination equipment
5. Adequate water supply
6. Safety Equipment (fire blankets, gas masks, eye wash)
7. Access to communications or alarm when waste is being handled
8. Adequate aisle space at drum storage area
9. Arrangements with local authorities updated (ie: when a new emergency coordinator is assigned is a new copy sent to local emergency authorities)

Contingency Plan and Emergency Procedures
1. Contingency plan easily accessible
2. List of emergency coordinators up-to-date (7.011(5)(E)4.)
3. List of all emergency equipment up-to-date (7.011(5)(E)5.)
4. Check location of emergency equipment for several items on the above list (If cannot be located, blacken box)
5. Evacuation plan easily accessible or displayed
6. Has the contingency plan ever been implemented (no check box, yes blacken box)

Manifests
For off-site facilities
1. Manifests signed and dated (7.011(6)(A)1.)
2. Copy to transporter (7.011(6)(A)1.)
3. Copy to generator in 15 days (7.011(6)(A)1.)
4. Copy at facility for 3 years (7.011(6)(A)1.C.)
5. Are manifests in good systematic order
6. Are manifest discrepancies reported properly (7.011(6)(A)1.A. and B.)

Recordkeeping
1. Operating record available (7.011(6)(B)1.)
2. Operating record must include the following: (7.011(6)(B)2.)
   a. information from each manifest
   b. method of treatment, storage, or disposal for each hazardous waste and the date accomplished
   c. location and quantity of each waste at the facility (verify several by field check)
   d. a description of each waste
   e. a description of the process that produced each waste
   f. applicable hazardous waste numbers
   g. weight or volume-density with units
   h. methods, locations, and dates with reference to manifest numbers and/or chain of custodies
3. Volumes, dates removed, and disposition of leachate (7.011(6)(B)2.D.)

☑ 4. Records and results of monitoring, testing, and analysis performed (8.011(6)(B)2.E. and H.)
☑ 5. Summary reports on incidents requiring implementation of contingency plan (7.011(6)(B)2.F.)
☑ 6. Records of inspections (7.011(6)(B)2.G.)
☑ 7. Waste analysis records from off-site sources and notices of acceptance to generators (7.011(6)(B)2.I.)
☑ 8. All closure and post closure cost estimates (7.011(6)(B)2.J.)
☑ 9. A complete copy of the permit application (7.011(6)(B)2.K.)
☑ 10. Personnel training documentation (7.011(6)(B)2.L. and M.)
N/A 11. Record documenting refusal of arrangements from local emergency response authorities (7.011(6)(B)2.N.)

Reporting
☑ 1. Monthly Facility Reports available and submitted (7.011(6)(C)1.A.)
N/A 2. Are wastes received and not manifested reported within fifteen (15) days (7.011(6)(C)1.D.)

Financial
☑ 1. Has the closure cost estimate been adjusted annually (7.011(8)(B)1.)
☑ 2. Is the closure cost estimate kept at the site (7.011(8)(B)4.)

Containers
☑ 1. Are ignitable or reactive waste located at least fifty feet (50') from the property line (7.050(3)(A)1.)
☑ 2. Containers in good condition(7.050(3)(C))
☑ 3. Containers closed during storage(7.050(3)(E)1.)
☑ 4. Has the facility conducted and recorded the results from weekly inspections (7.050(3)(E))
☑ 5. Is the containment system free from cracks or gaps (7.050(3)(G)2.A.)
☑ 6. Is the present storage inventory in accordance with the permitted limits (permit condition)
☑ 7. Are any hazardous wastes stored outside the storage area (if no check, if yes blacken, these wastes must comply with 7.050(2)(A))

Tanks
☑ 1. If ignitable or reactive wastes are stored are they protected from any material or condition which may cause the waste to ignite or react (7.050(4)(A)1.B.)
SYSTEM NOT MATERIAL ■ 2. Does the leak detection system indicate leakage (if no check, if yes blacken)
☑ 3. Do uncovered tanks have sufficient freeboard (7.050(4)(D)2.B.)
☑ 4. Are tanks with overfilling control equipment tested once a day (7.050(4)(E)1.A.)
☑ 5. Is data from monitoring equipment recorded once each operating day (7.050(4)(E)1.B.)
☑ 6. For uncovered tanks is the freeboard checked at least once a day (7.050(4)(E)1.C.)
☑ 7. Are the construction materials inspected weekly to detect corrosion, erosion and leaking fixtures or seams (7.050(4)(E)1.D.)
☑ 8. Is the area immediately surrounding the tank inspected weekly to detect signs of leakage (7.050(4)(E)1.E.)

N/A Surface Impoundments
☐ 1. Are inspections conducted weekly and after storms (7.060(3)(B))
☐ 2. Are overtopping control systems functioning properly (7.060(2)(B))
☐ 3. Has there ever been a sudden drop in the level of the impoundment (7.060(3)(B)2.)
☐ 4. Have liquids been collected in the leachate collection and removal system (7.060(3)(B)3.)
☐ 5. Is there any erosion or other signs of deterioration (7.060(3)(B)4.)
☐ 6. Do the surface impoundments have adequate freeboard as described in the permit (7.060(2)(B))

N/A Groundwater Monitoring and Post-Closure Permits
☐ 1. Wells in good condition, properly covered and locked
☐ 2. Wells properly sealed to prevent surface infiltration
☐ 3. Test pumps for faucets if present
☐ 4. Conduct cursory review of monitoring results and record last sampling date and last date results were submitted to the WMP/PS
☐ 5. Are the Quality control/Quality Assurance Plans kept on-site

Please mark boxes as shown below

☑ IN COMPLIANCE OR IN GOOD CONDITION

■ IN VIOLATION OR IN POOR CONDITION (Must be described in the report)

Inspector's Name: Joe Hoake

Title: ES III

Office: SLRO